UTAH DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS CENTER
MONTHLY REPORT OCTOBER 2003

2060 South 2760 West, Salt Lake City, UT 84104
Phone: 887-3700 Fax: 887-3797 commuterlink.utah.gov

Field Devices Summary

Freeway Closed Circuit Television (CCTV)	163
Surface Street CCTV	32
Dial-up CCTV	35
Total CCTV	**230**
Freeway VMS	42
Surface Street VMS	17
Portable VMS	2
Total VMS	**62**
HAR (6 deployed, 5 portable units)	11
TMS	231
RWIS	41
Connected Traffic Signals	623
Connected Ramp Meters	23

Operations Summary

VMS Messages Displayed	323
Signal Timing Calls	38
Signal Maintenance Calls	193
New Work Orders	304
Incident Responses	570
Website Visitor Sessions	85,835
511 Calls	18,005
Email Alerts Sent	409
CommuterLink Questions	12

TOC Employee of the Month

Robert Newbold — ATMS Maintenance

UDOT Meteorologist/RWIS Specialist, Ralph Patterson, measuring the first inch of snowfall at the TOC

KUDOS!

I know that UDOT does not receive many compliments. I just wanted to call and tell you I appreciate the timing changes made at 600 South and 400 West. I really notice a difference in my morning commute.

—Jerry Callister

TOC Mission

1. To Support UDOT and the Department of Public Safety in Improving Highway Safety.
2. To Help Provide Reliable and Efficient Travel.
3. To Provide Useful and Timely Real-time Traffic Information.
4. To Work Together with Other Government Agencies to Serve the Public.
5. To Provide Excellent Customer Service.

ACTIVITY HIGHLIGHTS

TOC Activities

This Month

1. The snow started to fall at the end of October. Ralph Patterson, and his Weather Team from Northwest Weathernet, Glen and Ethan, handled the forecasting of the season's first snowstorm exceptionally. Things that contribute to the success of the weather team are daily weather briefings and weather trainings held for the control room staff. Several local news stations visited the TOC and other UDOT sheds to get the most up-to-date weather information and road conditions. Joe McBride won the annual TOC Snow Pool competition when the TOC recorded its first inch of snowfall on Halloween Night.

TOC Meteorologist Glen Merrill

2. Glen Merrill is a new Meteorologist who will be working with the TOC Weather Team. Glen has been forecasting in the Cottonwood Canyons for avalanche safety at UDOT Shed 249. Glen now works for Northwest Weathernet, and is excited to extend his knowledge of forecasting and meteorology to aid UDOT crews in taking a proactive approach to keeping roads clear and safe.

3. Graduate students currently enrolled in a transportation-engineering course at Utah State University toured the TOC. The transportation course is centered around Traffic Simulation with an emphasis on utilizing computer software to model traffic. These students were able to see how traffic models and simulations are employed by UDOT engineers to create actual traffic plans across the state of Utah.

USU Civil Engineering Students

4. Highway Patrol Cadets visited the TOC while training on 2-way radio etiquette. DPS guided the future troopers through the control room and dispatch center to give them an idea of what a great resource the TOC can be to them in the field.

5. Amanda Martinez will be working in the radio room as the evening traffic producer and reporter. Amanda has worked with ClearChannel, and transferred over to the Airwatch traffic staff recently. She graduated from the University of Utah in Communications, and will be working a split shift to cover the morning as well as evening traffic peaks. Amanda also provides traffic reports on Channel 4 in the afternoons.

ATMS Improvement and Expansion Activities

The following is a list of many of the projects that have either been completed, or are currently underway:

Region 1:

- Inspections were performed on the fiber installation, which was completed last month in Roy. Once all inspections are completed, the new electronics equipment, which is currently being shipped to the TOC, will be installed bringing even more traffic signals online.

Region 2:

- The NTCIP ramp meter control firmware passed its acceptance test. Now that it has passed the acceptance test, firmware is undergoing a field test that started October 9th, and will continue until the end of the year. If this field test is successful, this firmware will be deployed to all ramp meters in Salt Lake and Davis counties in 2004. This will be the very first NTCIP compliant ramp meter in the United States. The ISS Group has established communication to this ramp meter from the server room.
- The new RWIS server has been purchased and is being sent to Missouri to have software installed on it. This new server will enable meteorology staff to view data history so that road condition trends can be found. The server will enable plow drivers to better manage their sections of roadway by knowing when their salt content is too diluted, and providing them more dynamic information in the form of pages. This will save time especially for those shed foremen who drive long distances too check the road conditions. The new RWIS server is expected to be operational by the end of November.

Region 3:

- Three intersections on the Spanish Fork Signal Interconnect Project are now transmitting data from their Malfunction Management Units (MMU) across the communications link. This connection now makes it possible for the signal technicians to remotely monitor this unit to enable users to obtain important information from the traffic signal. Not only will the user know when an intersection malfunctions, but they will also be able to communicate with the MMU to see why to ensure the appropriate materials and resources are dispatched.
- The overlay and expansion project on I-15 from the Salt Lake/Utah County line to the north Lehi Interchange is nearly complete. A VMS, two CCTV/TMS sites, and an RWIS are included with this project. The completion of this project will extend the TOC's ability further into Utah County.

Region 4:

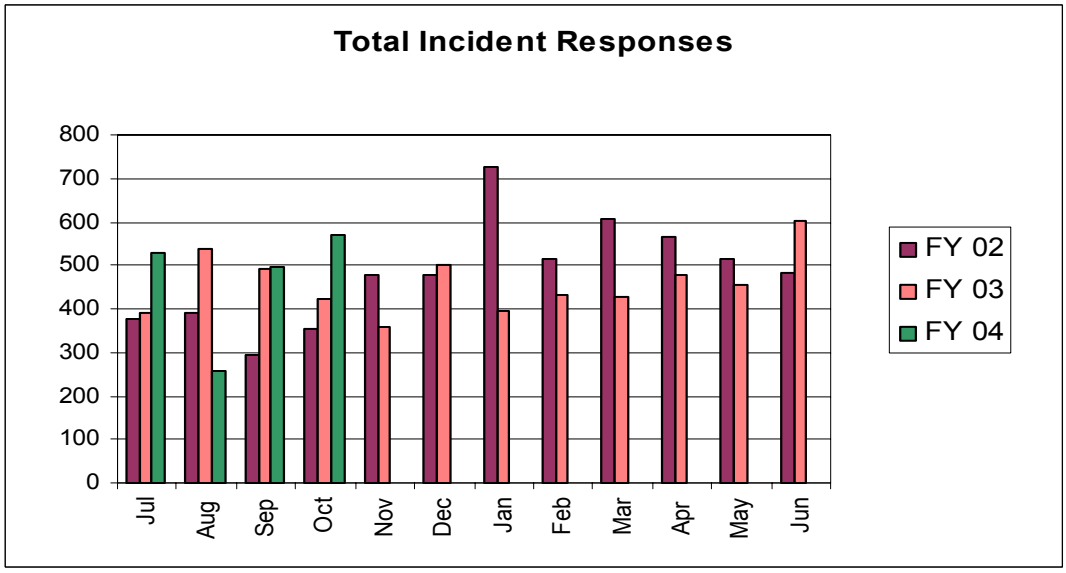
- A concept report has been written to add cameras, video detection as well as fiber installation to US-191 in Moab. This installation would be similar to that on Spanish Fork Main Street. This project would involve installing fiber along US-191 from a central location in Moab to traffic signals along Main Street (US-191), then interfacing the fiber onto the State WAN to send this information back to Richfield, the TOC and other configured centers. This concept report is currently under review for funding and approvals.
- A change order in the design to install a camera and RWIS at the US-6 Helper Interchange is being prepared. Approval of this change order would provide even more weather and traffic information to better aid UDOT crews as well as motorists travel more safely on one of Utah's most dangerous highways.

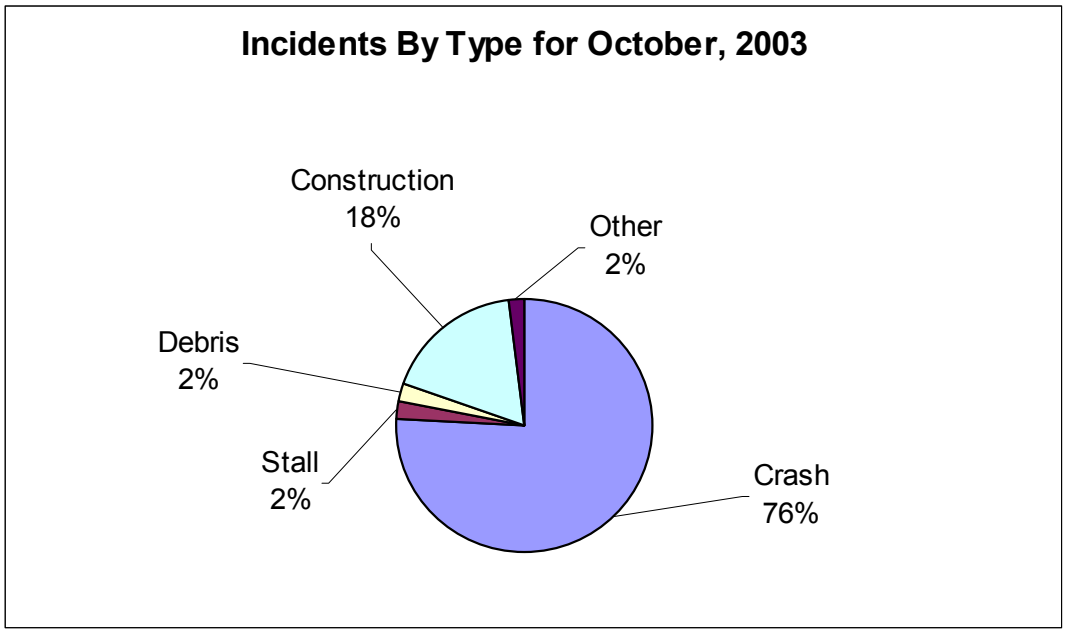
Acronyms

ATMS	Advanced Traffic Management System	TMS	Traffic Monitoring Station (count station)
CCTV	Closed Circuit Television	TOC	Traffic Operations Center
DPS	Department of Public Safety	TTI	Travel Time Index
HAR	Highway Advisory Radio	VMS	Variable Message Sign
RWIS	Road-Weather Information System		

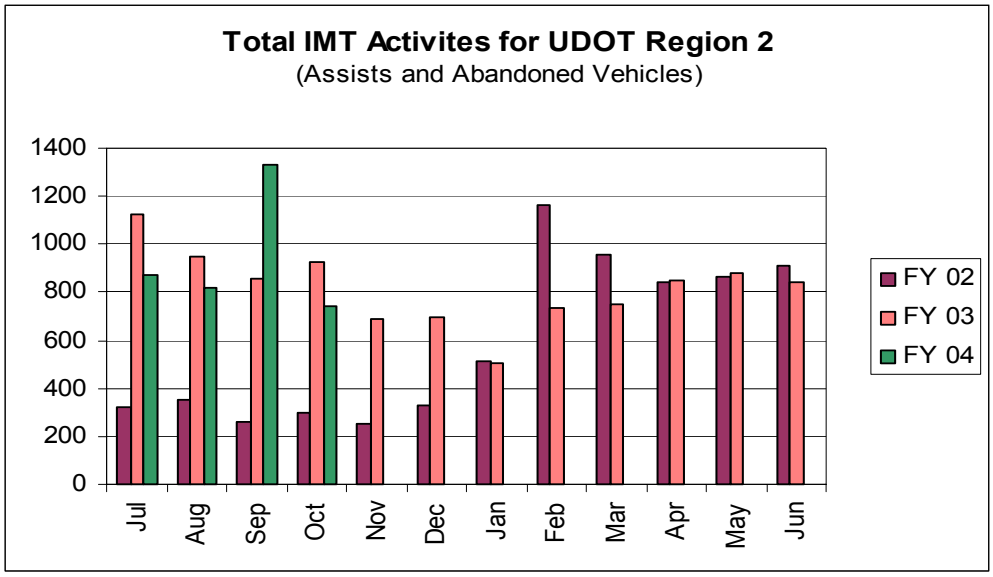
Safety

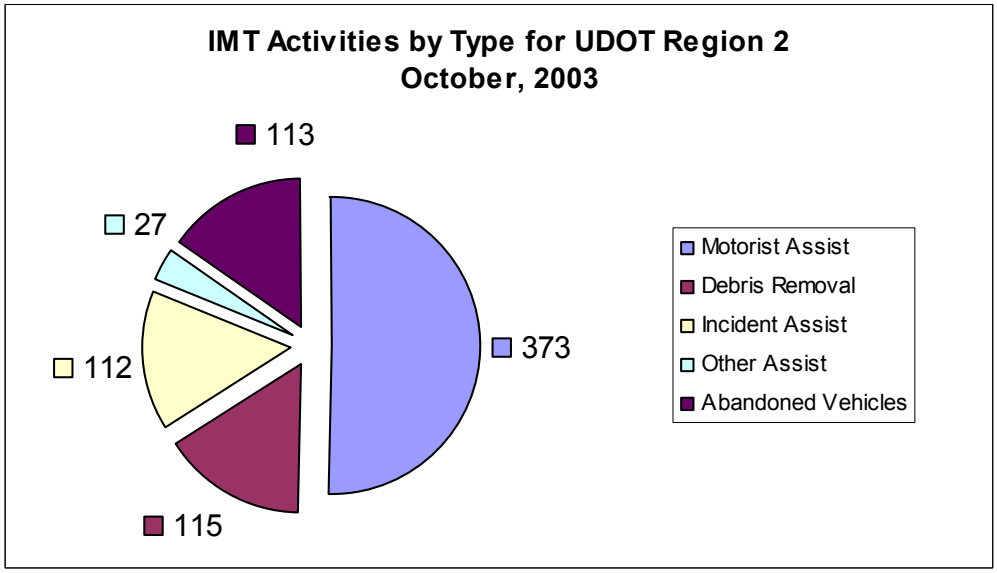
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts.





Region 2 Incident Management Team (IMT) Activities





Freeway Traffic Level of Service

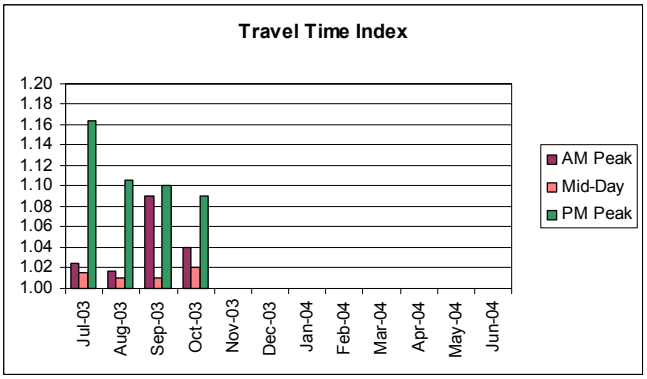
Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Salt Lake Valley. As more TMS sites are installed throughout the state, they will be included in these performance measures.

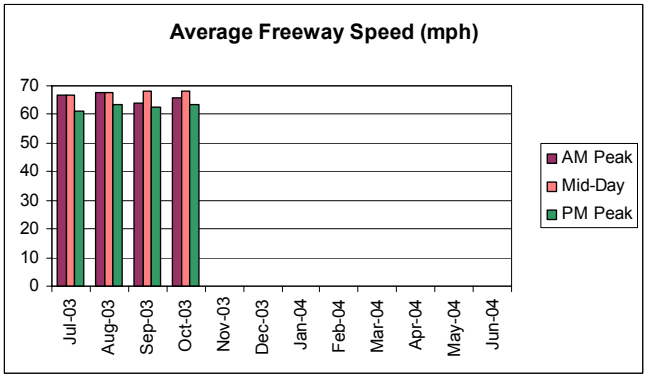
Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of one (1) represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

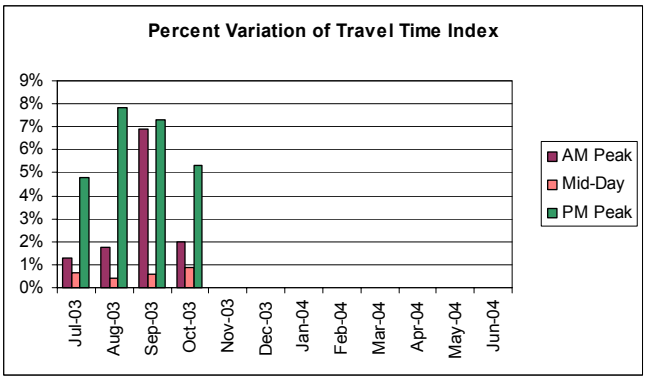
Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time index changes from day-to-day.

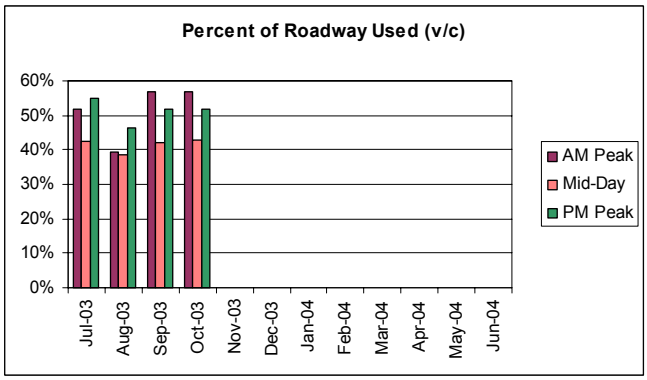
Average Freeway Speed: The Freeway Speed is weighted by volume.

Percent of Roadway Used: The percent of roadway used is the ratio of the volume on the segment to its capacity. This is otherwise known as the volume to capacity ratio, or (v/c).









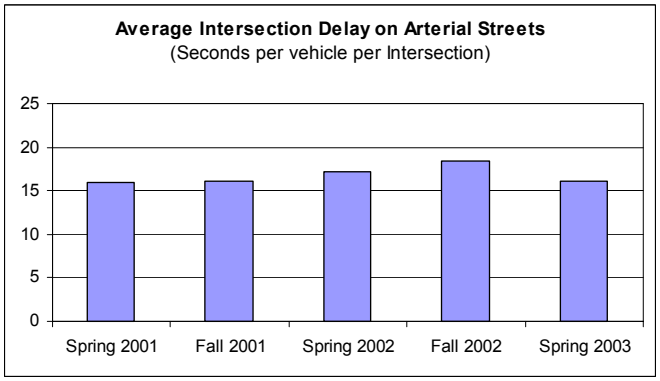
The 5 links with the highest average Travel Time Index for the month are:

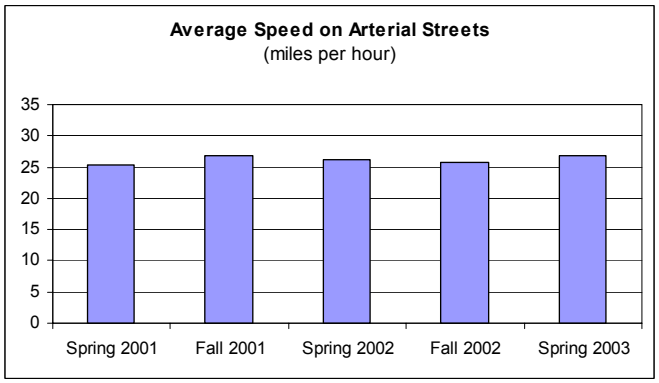
Segment	Period	Avg Of TTI
I-15 NB from Point-of-the-Mountain to 10600 S	AM Peak	1.49
I-15 NB from 10600 S to I-215 S	PM Peak	1.44
I-15 NB from 600 N to I-215 W	PM Peak	1.31
I-15 SB from 10600 S to Point-of-the-Mountain	PM Peak	1.22
SR-201 WB from I-15 to I-215 W	PM Peak	1.21

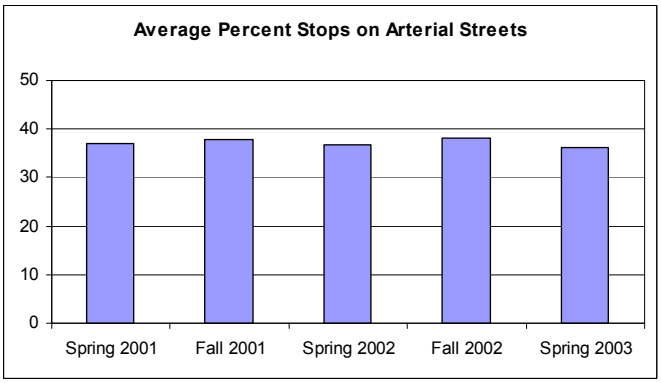
Surface Street Traffic Level of Service

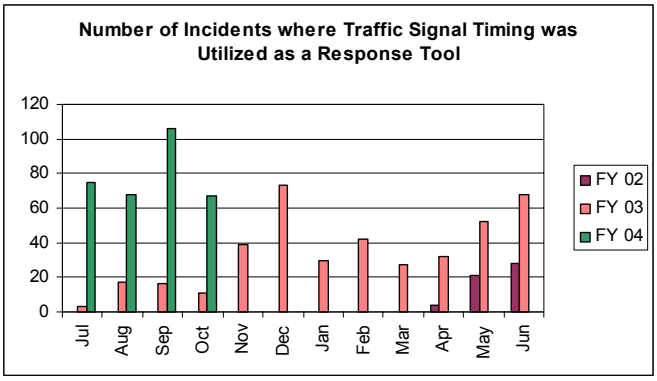
The surface street traffic statistics are generated through a series of Travel Time measurements. Much can be learned through several runs along a corridor, including the average travel time, the average percent of intersections at which a vehicle must stop, the average time stopped at an intersection, and the average speed. The Statewide Timing group gathers these measurements from Regions 1 through 4 twice each year. The chart in the lower right corner shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.

Since the data is gathered semi-annually, each month this report will provide charts for a region compared to the statewide average. The charts below represent the bi-annual statewide averages.

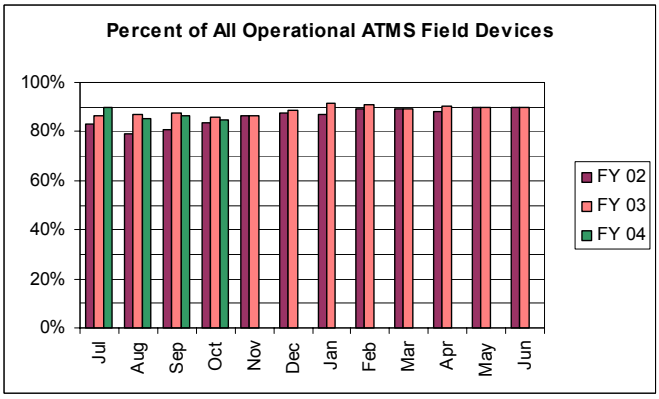


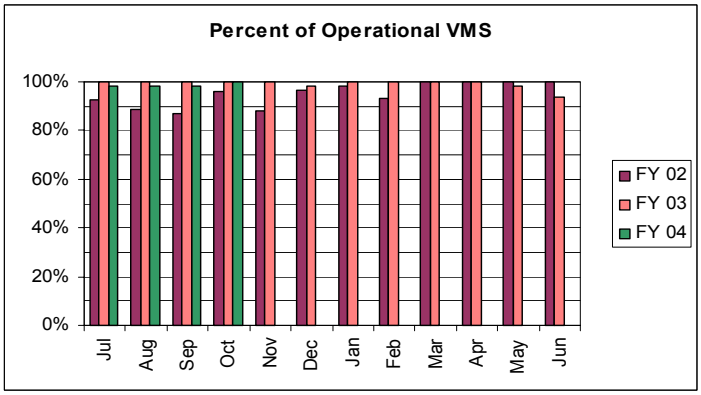


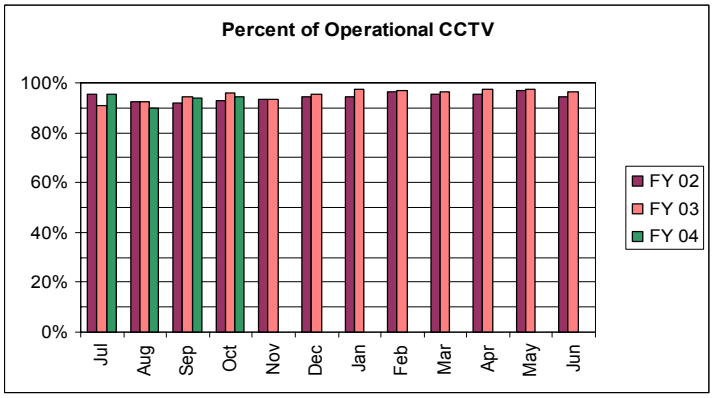


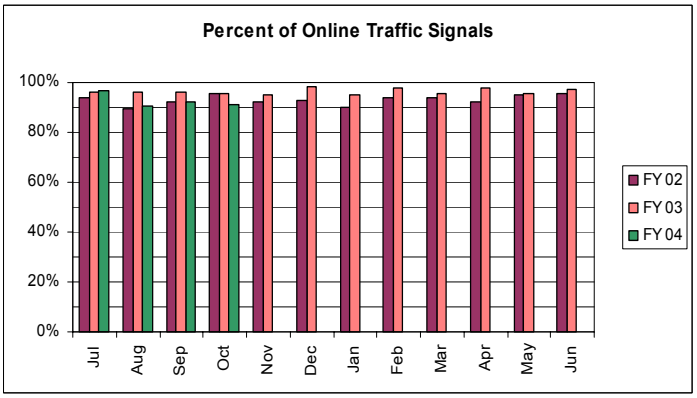


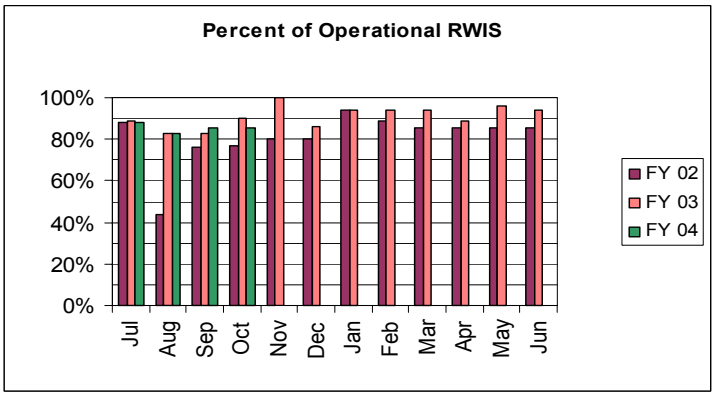
Maintenance

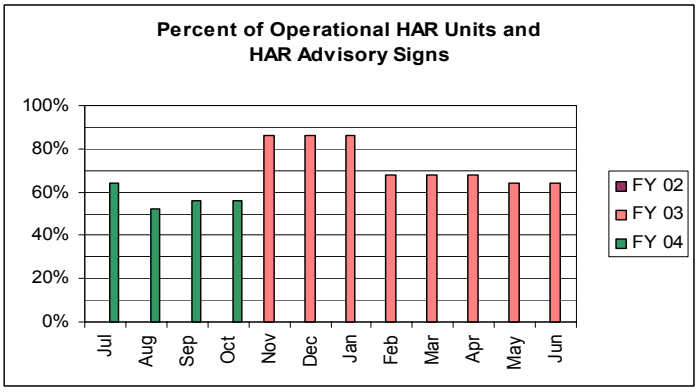


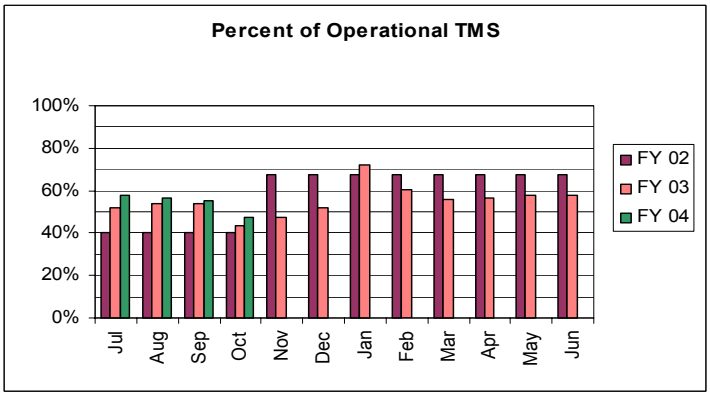




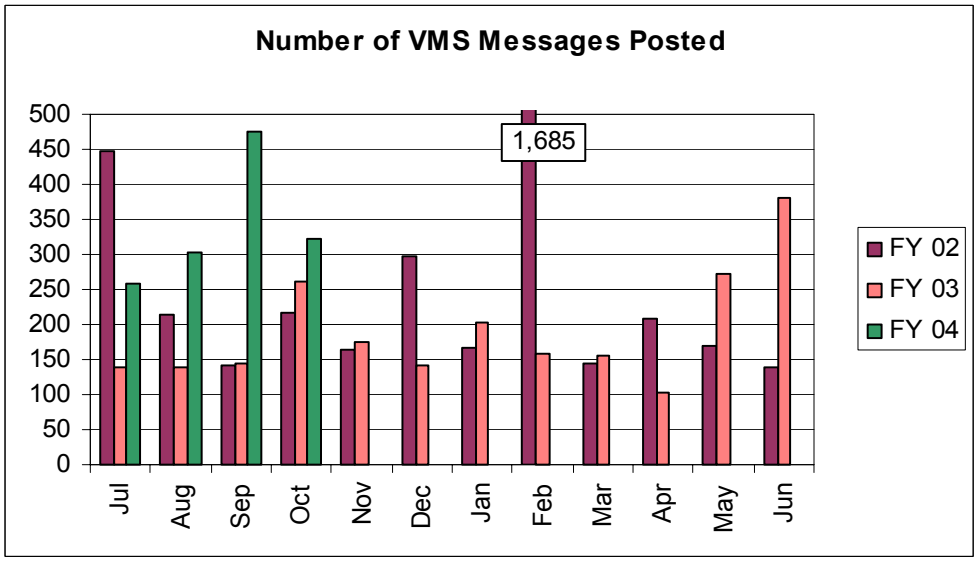


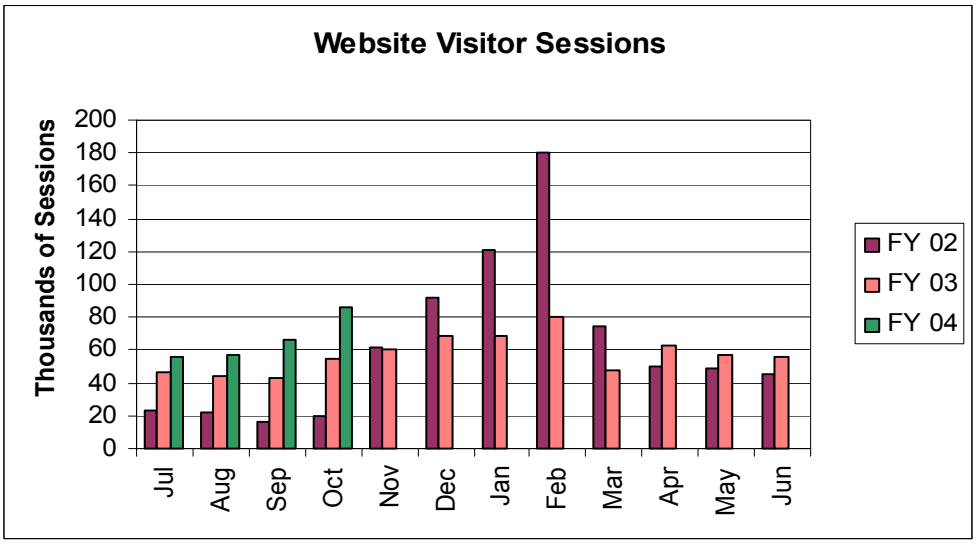


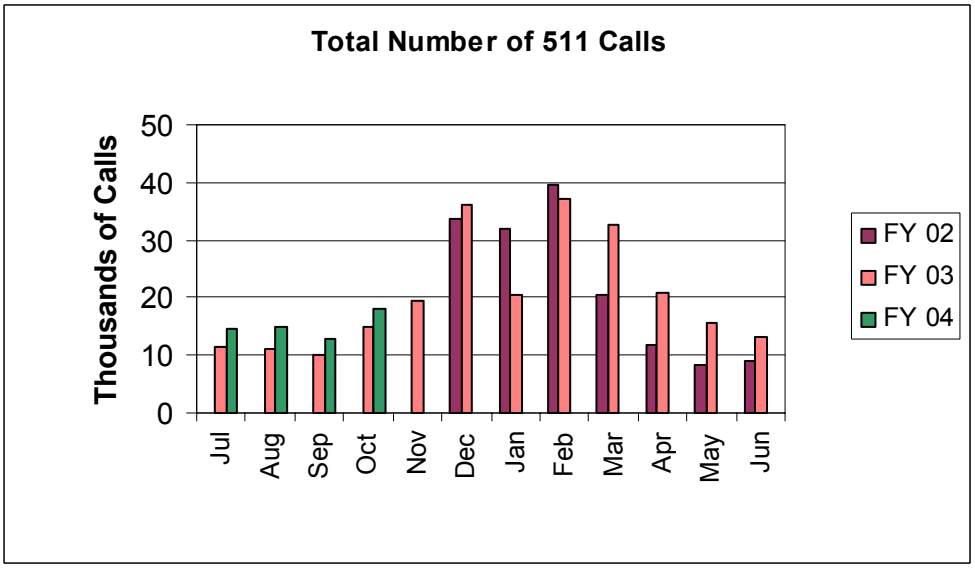




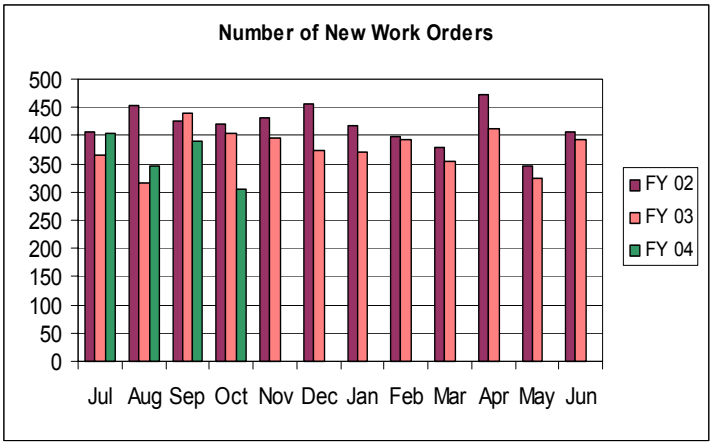
Traveler Information

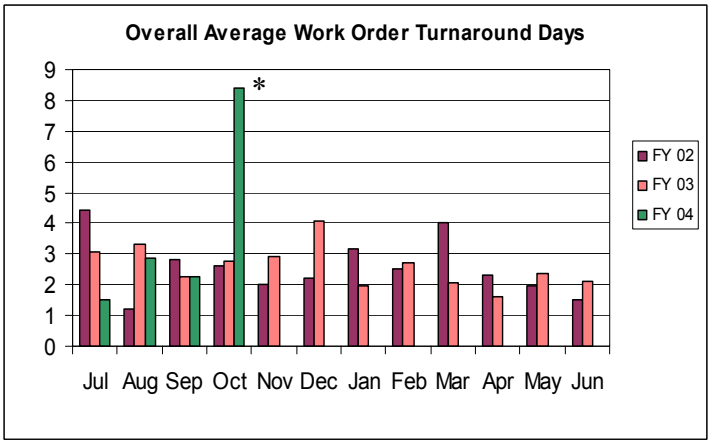


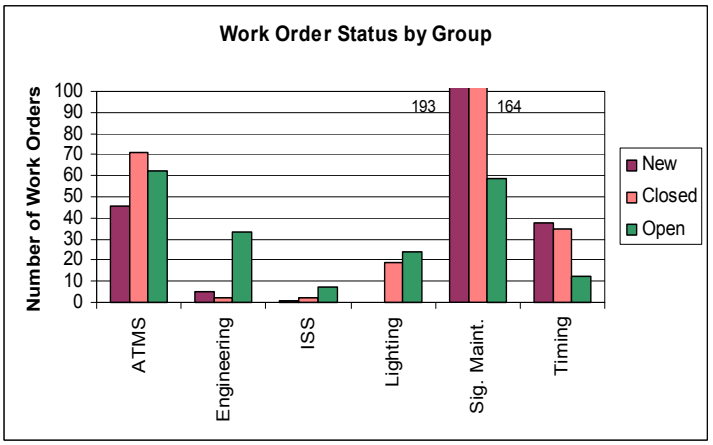


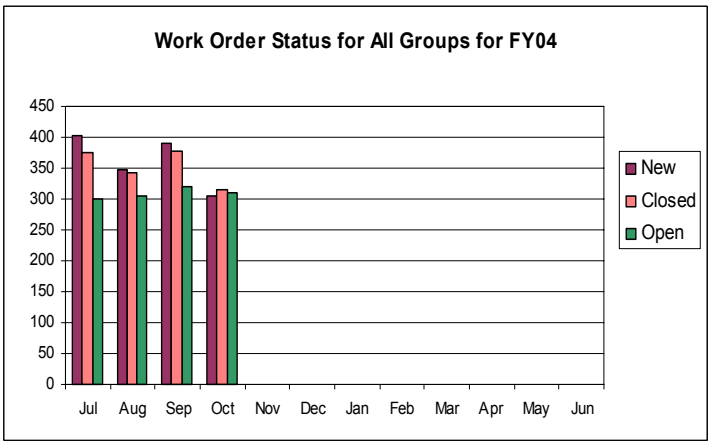


Customer Service









*The number of overall average work order turnaround days is high as the ATMS Maintenance Crew reconciled outstanding work orders.